

Review of: "A Case for Nature in Long-Haul Space Exploration"

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The essence of the article is summarized by the title and somehow refined in the article but always in very general terms. That the lack of exposure to natural weather/daily/seasonal variations contributes to the monotony and stress of human spaceflight is a well-established fact (ref. "Space Safety and Human Performance", Elsevier 2018). However, the article does not articulate a strategy for embedding nature in space habitat. In this respect I would recommend considering and discussing the implementation of the following functions.

1. Due to lack of gravity what is the floor and what the ceiling in a space habitat is a matter of convention. The upper part is where lights are placed. Russians use light colors there contrasting with dark colors on the lower part. This is a field in which more work can be done to create a natural environment feeling while aiding orientation.
2. The crew on board needs to exercise for several hours per day as a countermeasure for lack of gravity. Usually, they are on treadmills facing a wall. This could be changed for a large perhaps curved screen on which virtual terrestrial landscapes could be projected and further enhanced by some localized airflow and random draft of air. Wearing directly VR glasses should be avoided, because they may induce sea-sickness effects.
3. During free time virtual visual access (under the right conditions) to the starry outer space can be a great entertainment.